MINUTES

Thursday, November 8, 2001

Virginia Department of Transportation Auditorium

9:30 a.m. — 12:00 p.m.

ATTENDANCE:

Members:

Secretary of Technology Donald W. Upson; Tim Bass (Virginia Retirement System); Farley Beaton (Department of Taxation); Leslie Carter for Scott Fairholm (Department of Information Technology); Cheryl Clark (Department of Motor Vehicles): Bill Cleveland for David Sullivan (County of Goochland); Merritt Cogswell (Department of the State Internal Auditor); Ray Davis (Department of Game and Inland Fisheries); Chip German (University of Virginia); Mike Goetz (City of Lynchburg); Larry Gumprich (Department of Social Services); Bernie Hill (Virginia Department of Transportation); Gary Janak for Donald Darr (Department of Planning and Budget); Shelly McCabe (Secretary of the Commonwealth); Ken Mittendorff (Supreme Court of Virginia); David Molchany (County of Fairfax); Lan Neugent (Department of Education); David Nims (Electronic Government Implementation Division); Gerry Pacyna (State Corporation Commission); Jim Peters (Virginia Employment Commission); Chris Saneda (Department of Alcoholic Beverage Control); Bill Shinar (Virginia Geographic Information Network); Jerry Simonoff (Department of Technology Planning); John Taylor for Dee Pisciella (Department of Corrections); Bill Wilson (Division of Legislative Automated Systems)

Staff:

Jenny Wootton (Department of Technology Planning)

Presenters, Guests, and Representatives:

John Becker (Fenris, Inc.); Peter Berinato (Department of Social Services); Peter Clay (Fenris, Inc.); Vince Cordivano (IBM); Hud Croasdale (Virginia Tech); Amy DeHart (Virginia Military Institute Research Laboratories); Beth DeHaven (Microsoft); Bette Dillehay (Deputy Secretary of Technology); Twyla Garrett (Electronic Government Implementation Division); Mitchell Goldstein (Joint

Commission on Technology and Science); Richard Koester (Booz Allen Hamilton); Donna Lankford (Virginia Lottery); Ben Lewis (Metro); Michael Logan (Department of Technology Planning); Paul Lubic (Department of Technology Planning); Skip Maupai (Office of the Secretary of Technology); Carroll Mitchell (WorldCom); Leonard Nottingham (KPMG Consulting); Cleo Rehmer (Metro); Saju Varghese (Satyam Computers); George Williams (Department of Technology Planning); Diane Wresinski (Department of Technology Planning); Mary Zdanius (Gateway); Dan Ziomek (Department of Technology Planning)

Members Absent:

Don Darr (Department of Planning and Budget); Scott Fairholm (Department of Information Technology); Jan Fatouros (Department of General Services); Larry Hengehold (Virginia Community College System); C. Preston Huff (The Library of Virginia); Joy Hughes (George Mason University); John Noftsinger (James Madison University); Dee Pisciella (Department of Corrections); Ernie Steidle (Department of Rehabilitative Services); David Sullivan (City of Virginia Beach)

MEETING OBJECTIVES

The objectives of the Council meeting are (1) To focus on security issues in the Commonwealth; (2) To discuss proposed COTS By-Laws; (3) To discuss the Web Services Pilot Project Initiative; (4) To explore areas of mutual interest between COTS and the Joint Commission on Technology and Science; and (5) To recommend the adoption of the policies, standards, and guidelines relating to the Enterprise Architecture effort.

WELCOME AND OPENING REMARKS

COTS Executive Director Jenny Wootton called the meeting to order at 9:40 a.m. and introduced Secretary of Technology Donald W. Upson. Secretary Upson remarked that the Council has been meeting for over 40 months now. During that time, Virginia has stopped talking about what its going to do and now we are talking about what we have done and what the next Governor has to do. The Secretary thanked the COTS members for putting Virginia on the map in terms of technology, and the showcase of products and services. What the next Secretary of Technology and Governor gain is a solid foundation to move eGovernment into a whole new dimension due to the collaboration and cooperation of the Council. Secretary Upson thanked everyone for making the office he holds a permanent, viable, and high-expectation part of Virginia state government. He urged the members to get excited about a new agenda, and offered his support from the outside as best he can.

One of the most pressing issues since September 11 is security. Secretary Upson sent a memo to the Governor and talked to him before he testified to the House Science Committee about some of the things Virginia is doing. The Commonwealth and COTS was looking at security before it was cool. The mechanism, the Department of Technology Planning, COTS, Department of Information Technology, and Virginia Information Providers Network–that is the structure that should be managing cyber-

security in the Commonwealth of Virginia. COTS is the group that needs to put together the protocols, the standards, catalog our cyber-assets, and figure out a strategy to manage those assets. Not only within our state but how they connect to the national network. Project Matrix has received a level of interest and we are likely to be the first state to map critical assets.

Ms. Wootton thanked the Virginia Department of Transportation and Chief Information Officer Bernie Hill for use of the VDOT Auditorium and for the refreshments.

Approval of Minutes

Ms. Wootton introduced the minutes of the September 24, 2001, meeting at the Commonwealth of Virginia Information Technology Symposium (COVITS) at Virginia Military Institute. The minutes were approved unanimously and will be posted to the COTS website at www.sotech.state.va.us/cots.

Presentation: "Anatomy of an Attack"

Ms. Wootton introduced Peter Clay, president, and John Becker, director of physical security, of Fenris, Inc. Secretary Upson noted the level of collaboration across agencies that has enabled the MyVirginia PIN environment. No other government in the world has put into place an architecture that allows multiple services across multiple agencies at multiple levels of government within a single PIN environment, accessible not only on the state portal but through community portals. The backlog of agencies seeking information and interested in involving their application actually exceeds the state's ability for involving all of them. The Council is creating a new standard for Virginia government services–is it "My Virginia" compatible? If we can move services across all levels of government through a single PIN environment, where appropriate, we not only give the better ability to control costs and the obvious simplicity for citizens and business to interact with government, but we also rely on the same architecture. Having one architecture makes security control and management much easier.

Peter Clay met with Secretary Upson and talked about threat assessments, which he has conducted all over the world. Secretary Upson said a threat assessment multiple vendor contract for state and local government coming out of this group is an important component of a comprehensive state cyber-security program administered by COTS through the Secretary of Technology.

Peter Clay described the theory behind electronic attacks is similar to the theory behind physical attacks. All serious electronic attacks have a significant physical component. Because attackers seek out weaknesses in systems, those with physical security measures in place may deter attackers. Many security experts have difficulty quantifying cost-savings, as it is impossible to know how many potential attackers were fended off. Attackers are usually trying to steal something (data, money, etc.) or cause damage (denial of service, vandalism) for political reasons, to seek revenge, or ruin reputations.

The "tools" of electronic attacks include information that is readily available on the Internet and scripts that can be downloaded easily by "crackers"–people who can find vulnerabilities in systems and exploit

them. Electronic attackers use similar methods as those who perpetrate physical attacks–surveillance, blackmail, bribery, breaking and entering, posing as someone they are not, causing a distraction (pulling a fire alarm).

The "tools" of electronic security can deter and prevent attacks if used properly. Human observation of logs and network operations is essential–such documentation is useless unless someone checks it regularly for inconsistencies or potential problems. Firewalls, intrusion detection systems, and encryption are also effective security tools. Though a great deal of security is in the physical realm, a great deal of security is tied directly to business practices. Policies and procedures need to be implemented to ensure security measures are clarified and followed. In addition, strong passwords and user IDs are necessary, as well as strong employee education and awareness.

Mr. Becker led the group through a case study involving the state of Texas. The case study included components on why attack, how to attack, when to attack, where to attack, and conclusion of attack. In the case study, the motivation behind the attack scenario was greed. The attacker examined the Texas Department of Transportation, which handles drivers licensing and vehicle registrations for the State, to use for credit card scams. After conducting research on the Internet, the attacker was deterred by the passive security measures in place and the relative difficulty of breaking into the system undetected.

With greed in mind, the attacker turned to the Texas Emergency Management Services (EMS) system, where communications and dispatches to local law enforcement and emergency responders are handled. The idea was to crash the system or gain control of it and dispatch officers to false locations while committing bank robbery. Officers would be everywhere except at the crime scene. Following reconnaissance over the Internet, the attacker determined that the EMS system was quite vulnerable and could be cracked directly from the EMS website, with no additional work required.

Mr. Clay recommended expanding security planning to incorporate physical and electronic security to protect Commonwealth of Virginia organizations. Security is comprised of deterrence, protection, and reaction, so it is critically important to use people as part of the monitoring and reaction processes, and to enforce policies and procedures.

WEB SERVICES PILOT PROJECT INITIATIVE

Ms. Wootton stated that Web Services is heralded as the future of Internet-based application development. It allows organizations to build reusable modules that are platform neutral that could have significant impact on web development in the Commonwealth. Ms. Wootton introduced Paul Lubic from the Department of Technology Planning.

Mr. Lubic stated that Web Services is on the technology horizon, and would be beneficial for the Commonwealth to examine the feasibility of the new technology. Web Services is an application development concept dealing with developing and using loosely coupled modules or components that are easily accessed over the Internet or intranet. The modules are platform-independent, based on four

standards, some of which are further along than others in development and will be available in the next year or so. The standards are XML (Extensible Mark-up Language), UDDI (Universal Description, Discovery and Integration) is the standard for registries and access, SOAP (Simple Object Access Protocol) is used to transport objects, and WSDL (Web Services Description Language) is an XML-based language that is used to define the actual services and their binding specifications.

Web Services could allow one agency to share modules with one another. Currently, agencies use custom-built interfaces to share data. With Web Services, the interface only has to be built once and will foster interoperability. Use of the Internet or intranet would save the Commonwealth a great deal of infrastructure costs. California recently spent $300 million on its infrastructure.

The proposed ad hoc COTS Workgroup on Web Services would seek participation from state agencies, localities, and higher education. The purpose of the Workgroup would be to develop expertise and experience in Web Services and develop actual pilot modules. Organizations can come to the table with an application in mind to test and take it back with them at the end.

The Workgroup would start in January 2002 and be complete in time to influence the budget and legislative process, probably September 2002. The following private sector partners have expressed interest: Microsoft, IBM, Software AG, Hewlett-Packard, Sun, Oracle, and the Council for Excellence in Government. In the public sector, the Department of Information Technology, Virginia Department of Transportation, Department of Education, Virginia Retirement System, and the City of Richmond have expressed interest in participating on the Workgroup.

The Council would provide oversight for the project, and the ad hoc COTS Workgroup would define a scope, define criteria for and selection of participants, and provide updates and recommendations to the full Council. Mr. Lubic requested approval from the Council to move forward.

Secretary Upson asked how the initiative relates to Web Services. Mr. Lubic stated that VIPNet would be the provider. Cheryl Clark asked about funding for the project. Mr. Lubic said that the vendor partners would provide products and services, Department of Information Technology would provide directory services, and each participating agency would absorb soft costs to participate.

Tim Bass said he attended a conference for Retirement Systems professionals where many discussions were held concerning the duplication of efforts to develop code and the need to share code among the systems. Mr. Bass recommended moving forward with research in this area.

Jerry Simonoff moved that the Council set up an ad hoc Workgroup to explore Web Services utilizing the work plan. Secretary Upson asked that the Executive Committee meet and come back to the Council with plans for how to streamline the number of Workgroups to ensure that all priorities are addressed. The motion passed unanimously.

Mr. Nims asked about membership and participation on the Workgroup. Ms. Wootton stated that the

Council members would be asked to participate or suggest colleagues who may be interested.

The Secretary of Technology recognized Ms. Clark who was promoted to Deputy Commissioner of the Department of Motor Vehicles.

Action Item: Form the COTS ad hoc Web Services Workgroup, soliciting membership from the Council and related entities, with the direction of the COTS Executive Committee.

COTS Bylaws

Ms. Wootton introduced the outline of COTS Bylaws. The Council has grown in scope and stature over the years. To help manage the operations, the Executive Committee of the Council was formed, primarily to coordinate Workgroups and ensure communication. The Committee has struggled somewhat with that assignment. Ms. Wootton spoke with an expert in board development who recommended best practices.

The Executive Committee examined three primary functions for the Committee. The Executive Director receives many requests for presentations or time to appear before the Council. Ms. Wootton state it is not the role of the Executive Director to decide what should or should not go on the agenda. That is the role of the Council through its representation on the Executive Committee. The Committee would be responsible for determining agenda items for full Council meetings.

The second function is the coordination and support of the Workgroups, and putting into place the mechanisms for proper communication and to ensure the Council benefits from the tremendous amount of work that goes on within the Workgroups.

The third role is that of filling vacancies on the Council. Every two years, all terms expires, and there are instances where individuals resign from the Council. It would be a logical role of the Executive Committee to make recommendations to the Secretary of Technology for nominations for appointment to the Council.

Ms. Wootton said she attended the Virginia Research and Technology Advisory Commission, which was recently codified. At their first meeting, they passed bylaws. The COTS does not have any written bylaws. To put structure in place to ensure that during transitions the policies and procedures are explicit.

Ms. Wootton sought feedback on the bylaws outline. Chip German noted a redundancy in the text.

Action item: Ms. Wootton will send out the bylaws outline by e-mail for comments and suggestions from the Council members.

Overview of the Joint Commission on Technology and Science

Ms. Wootton introduced Mitchell Goldstein, Executive Director of the Joint Commission on Technology and Science (JCOTS). JCOTS is the legislative body that addresses science and technology issues in the Commonwealth. The focus is to look at helping the General Assembly make better decisions and better policies related to science and technology. The Commission has twelve members, seven from the House of Delegates and five Senators. Each year, the Commission adopt a workplan after substantial input from government leaders (state, federal, and local), private citizens, private industry, and a host of other sources. Advisory Committees are formed to study specific issues that are important to the General Assembly.

There are a number of key issues for this year. The first issue is infrastructure. The JCOTS is working with the Rural Prosperity Commission and the Tobacco Commission to take a look at how to best meet the demands of the Commonwealth's infrastructure, whether it is telecommunications or high-speed Internet. The Commission is looking at the legality of allowing localities to provide high-speed Internet to citizens and businesses. JCOTS is also looking at intergovernmental architecture, security and privacy, and central reporting.

The second issue is privacy, particularly involving the use of social security numbers. Employee monitoring is also being examined. The final area for this issue is privacy of personal information.

The third area is electronic government, which is assuring the duties and powers of the Secretary of Technology includes promoting enterprise-wide thinking. Other issues and concerns for electronic government include the procurement of technology hardware, software, and services; extending the provisions of the electronic communication meetings; and assigning the task of and current processes and procedures.

Ms. Wootton noted that the Executive Committee is examining how to tap into various cycles, including the legislative cycle, the budget cycle, and the political cycle. The Council agreed to work with the Commission on areas of mutual interest. Mr. Goldstein recommended that Council members volunteer to participate on the JCOTS Advisory Committees.

Action item: The COTS Executive Director will communicate regularly with the JCOTS Executive to Director keep the Council members informed of opportunities to assist the Joint Commission on Technology and Science.

POLICIES, STANDARDS, AND GUIDELINES

David Molchany introduced the policies, standards, and guidelines (PSGs) related to networking, security, and middleware. The PSGs come directly from the recommendations of the networking, security, and middleware domain teams of the COTS Enterprise Architecture Workgroup that were approved by the Council previously. The documents are available on the COTS website and were e-mailed to all members. Mr. Molchany recommended the Council recommend these documents to the

Secretary of Technology for approval and promulgation.

Ray Davis moved that the Council recommend the Enterprise Architecture policies, standards, and guidelines as presented to the Secretary of Technology. The motion was carried unanimously.

COTS **AD HOC WORKGROUP ON MAJOR IT PROJECTS STATUS DASHBOARD**

Chris Saneda and George Williams from the Department of Technology Planning provided an update on the COTS ad hoc Workgroup on Major IT Projects Status Dashboard–a Workgroup formed at the September meeting of the Council. The purpose of the group is to facilitate major project reporting and improve the existing process. A team has been formed made up of state agencies and higher education, that has addressed the reporting needs of project managers, agency heads, and secretaries.

George Williams demonstrated the pilot Status Dashboard, developed by the Department of Technology Planning.

COMMONWEALTH SYSTEMS–AN INTEGRATED APPROACH

The motion passed with three abstentions.

Action Item: Form the COTS ad hoc Commonwealth Systems Workgroup to explore options for enterprise-wide solutions.

NEW BUSINESS/PUBLIC DISCUSSION/CLOSING REMARKS

Secretary Upson presented to all Council members an engraved pewter cup to thank them for their service to the Commonwealth during his tenure.

ADJOURN

Ms. Wootton thanked everyone for participating and adjourned the meeting.

NEXT MEETING

The next meeting of the Council is Thursday, January 10, 2002, at the Virginia Department of Transportation Auditorium in Richmond, from 9:30 a.m. to 12:00 p.m.

Respectfully Submitted,

Jennifer L. Wootton
Executive Director
Council on Technology Services